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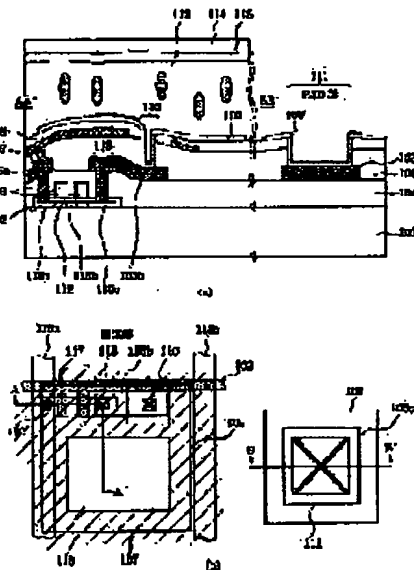
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## (54) LIQUID CRYSTAL DISPLAY DEVICE AND ITS PRODUCTION

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To make it possible to increase a contrast, to decrease the variations of many pixels and to reduce a manufacturing cost by forming the same electrode layer as the pixel electrodes of an image display section on the bonding pads of peripheral circuits as well.

**SOLUTION:** The pixel electrodes 109 are disposed not only in the pixel parts but on the bonding pads 105 as well and are electrically connected via openings 111 on the pads. ITO films are most frequently used as the pixel electrodes 109. Al-Si films are adequate, for example, for the drain electrodes 105b of TFTs and the bonding pads 105c. The improvement of the ohmic property with the ITO films is executed by depositing films of, for example, titanium nitride, titanium, etc., on the Al-Si surfaces. Hydrogenation is executable after all of the stages to induce the damage of dry etching, etc., are ended in this stage and, therefore, the recovery and removal of the damage are embodied with good reproducibility. Since through-holes and the openings 111 of the pads are executable by the same stage, the production stages are simplified.



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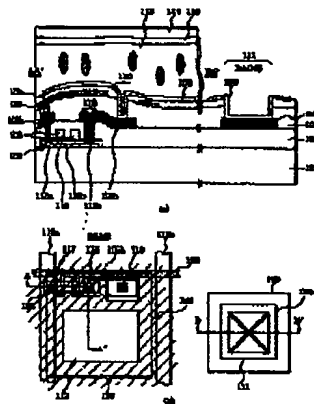
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(54)【発明の名称】 液晶表示装置およびその製造方法

(57)【要約】

【課題】 液晶表示装置のスイッチング素子の特性を向上し、さらに製造コストを小さくする。

【解決手段】 スwitchング素子11を設けた面を液晶表示部と、液晶表示部に電圧を印加する電極111とを備えた一方の基板101と、前記一方の基板101に形成した透明電極112を備えた他方の基板114と、前記一方の基板101と前記他方の基板114で挟持した液晶とを有する液晶表示装置の製造方法において、前記透明電極112と同一の電極層109を、前記電極層111のボンディングパッド103aにも形成する。



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